

REMARKS:

Applicant thanks the Examiner for his attention to the application and especially for the indication that Claims 4-7, 9-12 and 13-15 would be allowable if rewritten in independent form. Applicant has rewritten those claims.

Claim 16 is rejected under 35 U.S.C. §112 first paragraph because it claims subject matter not described in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make and/or use the invention. Respectfully, Applicant directs the Examiner's attention to paragraph 41 in which the use of the jacks to align and anchor the drilling apparatus is described. The hydraulic jacks 82 which are inherently adjustable as to their length, are inserted into the appropriate ports 80 of the drilling apparatus and brace the drilling apparatus against one or more of the walls, ceiling, or floor of the work site. Applicant believes that this description is entirely sufficient to enable one skilled in the art to fix the forward and rear assemblies in position relative to the workface. Paragraph 41 goes on to suggest that one of the front and rear support assemblies can be raised or lowered relative to the other by the jacks to change the angle of attack of the drill bit. Similarly, the side-to-side angle of attack can be adjusted by using the jacks to move one of the front and rear supports left or right with respect to the other. Again Applicant believes that this description is sufficient to allow one skilled in the art to make the adjustments described and claimed.

Claim 1 is rejected as anticipated by Stow U.S. 3,174,562. Respectfully, there is a significant difference between the claims mentioned and Stow as to which a brief review of the invention may be helpful for a fuller appreciation thereof.

In Stow conventional hydraulic cylinders 16 are used to propel the auger forward. The hydraulic cylinders 16 are connected to a frame 1 as shown in Figure 1 and described at column 3, lines 36-39, and the rods are connected to brackets 20 on carriage 18 by nuts 21. As the hydraulic cylinders are extended, carriage 18 and carriage 3, which is connected to carriage 18 by links 22 as described at column 3, lines 40-43 are advanced together so that the auger and the tube 14 are fed into the bore hole.

The present invention works in a fundamentally different fashion. The frame 1 of Stow is essentially eliminated in applicant's arrangement. As set forth in claim 1, the

apparatus includes a pair of hydraulic cylinders, each including a barrel and a support rod extending axially through the barrel, the barrel being movable along the support rod. A head mounting plate assembly is attached to the barrels of the pair of hydraulic cylinders. Reference to Figure 1 will clarify the arrangement. The support rods 28 extend longitudinally through the barrels 30. As shown, and in accordance with the preferred embodiment of the invention, the support rods are attached to front and rear support assemblies 18 and 16 respectively which are attached to jacks 82 to support the drilling apparatus.

The Examiner will immediately recognize that the hydraulic cylinders themselves and more specifically the support rods form the frame for the drilling apparatus and no other frame member is required. This greatly reduces the number of parts required to assemble the apparatus and makes disassembly, transport, and reassembly substantially simpler than with prior constructions including Stow. In the simplest installation, the front and rear support assemblies could be anchored to the floor of the location from which a bore is to be made and no additional components whatsoever would be required. Typically, jacks 82 are used to position the apparatus as described in the written description of the invention, but this is a preferred implementation of the invention not required by the broadest claims.

Applicant respectfully submits that Claim 1 as now amended clearly recites a head mounting plate assembly attached to the barrels of a pair of hydraulic cylinders which is not shown by Stow.

Claim 12 as originally presented already includes this limitation as does claim 17.

The Examiner suggests in the rejection of Claims 2, 3, 8, 12 and 16-19 that even though Stow admittedly does not show the plate assembly mounted to the barrel portion, the device functions exactly the same except for this reversal of parts. We have now demonstrated that this is not the case. The claimed invention has a support rod extending axially through the barrel. This is more than a mere "reversal of parts". The claimed invention eliminates the need for a separate frame as required by Stow. Applicant respectfully submits that by taking this position, the Examiner has succumbed to the siren song of hindsight. Nothing in Stow suggests the arrangement claimed by applicant and it is only from applicant's invention that the utility of the new arrangement can be seen.

Each matter raised in the office action having been addressed,
reconsideration and favorable action are requested.

April 1, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "S. B. Salai", is written over a horizontal line.

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